

MARINE ENGINES

SHAFTING OF RECIPROCATING STEAM-ENGINES

Reciprocating steam-engine installations shall have shafts the diameters of which shall be not less than as given by the following rules, where:

D is the diameter in inches of the low-pressure cylinder, or the equivalent diameter where two or more low-pressure cylinders are used.

S is the stroke of piston in inches.

P is the working pressure in the boiler in pounds per square inch.

r is the ratio of the swept volume of the low-pressure cylinder or cylinders to that of the high-pressure cylinder. Then

- i. Diameter in inches of the intermediate shafts

$$\frac{3^a \times S^b \times P}{(r-1-2)}$$

The following are the various values of/;

- (a) 2 ("ranks at 90°,
Cylinders compound,
triple, or quadruple ..
- (/;) 2 Cranks at 180",
Cylinders compound,
triple, or quadruple ..
- (c) 3 ("ranks at 120°
Cylinders compound,
triple, or quadruple
- (d) 4 Cranks balanced

